INJECT

Special mortar for valve systems, with controlled shrinkage, for medium and high pressure injections

Product description

INJECT is a special premixed, single-component, pourable, controlled-shrinkage mortar, specifically designed for the construction of micropiles, tie rods and valved systems in general.

Supply and storage

INJECT is supplied in bags on pallets or loose in a 22 m3 silo system..

Substrate preparation and application methods

INJECT is automatically mixed by the mixing and pumping unit (type SMP).
The mortar produced in this way is conveyed by the pump (type SMP), suitably modified, with selectable flow rates and conveying pressure up to approx. 15 bar; these values are merely a reference as the data are subject to variations depending on the length of the casting pipe, its diameter and climatic conditions.
The use of INJECT for high-pressure injections requires a piston pump, which is not included in the equipment supplied with the silo.

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The UNI EN 14199 standard

INJECT complies with the recommendations of “UNI EN 14199 Execution of special geotechnical works: Micropiles”:

- the absence of bleeding and/or segregation phenomena
- the good cohesiveness of the dough
- adequate fluidity
- the ability to self-compact
- workability
- the minimum cement content
- the mechanical resistance to compression

AICAP recommendations

INJECT complies with the AICAP recommendations - Anchorages in soils and rocks - regarding:

- fluidity
- resistance
- exudation
- withdrawal

Peculiarities of mortar

The composition of INJECT makes the mixture particularly homogeneous, sufficiently viscous, adequately fluid and suitable for injection at medium and high pressures.

Warnings

INJECT must be applied at a room temperature between 5°C and 30°C; in case of low temperatures (5°C ÷ 10°C) it is however advisable to mix the material with lukewarm water. Conversely, at high ambient temperatures, it is advisable to mix with cold water.
Do not mix INJECT with other substances.
Avoid large temperature changes during the setting phase. The product must be protected from frost and rapid drying.
The mixing water, for the correct functioning of the equipment, must be free of impurities and, for the quality of the mortar, must also comply with the reference standard.
The qualification of the mortar is obtained by the viscosity test and the density test of the mix; it is recommended to carry out these tests at least at the beginning of each casting session.
The proposed qualification of the mortar does not replace any mandatory design tests.
It is recommended that long storage periods in silos be avoided in order to prevent the loss of the cement binder’s characteristics and the related reduction in the hydration process of the cement with a consequent reduction in the mechanical characteristics of the mortar.

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TECHNICAL DATA	PERFORMANCE
Mixing water	approx. 35%
Maximum inert diameter DMAX	< 0.1 mm
Dough density	approx. 1920 kg/m3
Viscosity	10”-30”
(Marsh cone nozzle 10 mm)	10”-30”
Mechanical resistance to compression at 28 days	> 30 N/mm2
Mechanical resistance to bending at 28 days	> 6 N/mm2
Theoretical yield	approx. 1390 kg/m3
Plastic collection	absent under standard hygrometric conditions
Specific weight	approx. 1250 kg/m3 det. in free fall

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